

professional and the amateur's guidance.

"THE PYRAMID OF LIVING THINGS" by Edith Raskin, 192 pp., illus., McGraw-Hill Book Company, Toronto, London, Sydney, & New York 10036. 1967. \$4.50.

In this book the important ecological concept of the title is explained several times over in interesting, simple, quick-reading language. Young students as well as adults could profit from it and enjoy it. The interdependence of all life especially through the food chain is demonstrated among some of the major creatures of the following biomes -- the arctic and antarctic tundras, the tiagas, the deciduous forests, the middle latitude grasslands, the deserts, the tropical rain forests, and the savannas.

-----

#### ADDITIONAL NOTES ON THE ERIOCAULACEAE. XIII

Harold N. Moldenke

##### ERIOCAULACEAE Lindl.

Additional synonymy: Eriocauloneae Desv., Ann. Sci. Nat. 13: 45. 1828. Eriocaulaceae Desv. ex Bullock, Taxon 7: 15. 1958.

Additional & emended bibliography: L., Sp. Pl., ed. 1, 87 & 129. 1753; Crantz, Inst. 1: 360. 1766; Hill, Herb. Brit. pl. 66. 1769; Hope, Phil. Trans. Roy. Soc. 59: 241-245, pl. 12. 1770; Scop., Introd. Hist. Nat. 20h. 1777; Huds., Fl. Angl., ed. 2, 2: 414. 1778; Walt., Fl. Carol. 83. 1788; Lour., Fl. Cochinch. 1: 60. 1790; Cothen., Disp. 16. 1790; Schreb., Gen. 2: 666. 1791; L. C. Rich., Act. Soc. Hist. Nat. Paris 1: 113. 1792; Vahl, Symb. Bot. 3: 99. 1794; Roxb., Hort. Beng. 68. 1814; Vell., Fl. Flum. 35. 1825; Lodd., Bot. Cab. 14: pl. 1310. 1828; Desv., Ann. Sci. Nat. 13: 45. 1828; Bong., Mém. Acad. Sci. St. Pétersb., ser. 6, 1: 1-74, pl. 1-19. 1831; Wall., Numer. List 207. 1832; Hook. in Curtis, Bot. Mag. 59: pl. 3126. 1832; Bong., Mém. Acad. Sci. St. Pétersb., ser. 6, 2: 219-238, pl. 11-19 (1833) and ser. 6, Sci. Nat. 1: 545-560. 1835; Mart., Nov. Act. Acad. Leopold.-Carol. 17 (1): 1-72. 1835; Bong., Mém. Acad. Sci. St. Pétersb., ser. 3, Bot. 9-29, pl. 20-25. 1840; Kunth, Enum. Pl. 3: 492-580. 1841; Steud., Nom. Bot., ed. 2, 2: 654. 1841; Griff., Itin. Notes [Posthum. Papers 2:] 65. 1848; F. Muell., Trans. Philos. Soc. Victoria 1: 23-24. 1855; Steud., Syn. Pl. Cyp. 2: 261 & 268-283. 1855; Körn., Linnaea 27: 561-692. 1856; Steud., Syn. Pl. Glum. 2. 1856; Benth., Fl. Hongkong 382. 1861; Körn. in Mart., Fl. Bras. 3 (1): 273-508, pl. 38-62. 1863; T. Caruel, Mém. Soc. Imp. Sci. Nat. Cherbourg 14 [ser. 2, 4]: 5-16. 1868; Körn. in Warming, Vidensk. Medd. Naturh. For. Kjøbenh. 23: 309-316. 1871-

1872; Benth., Fl. Austral. 7: 192. 1878; F. Muell., Syst. Census Austral. Pl. 123. 1882; F. M. Bailey, Syn. Queensl. Fl. 578. 1883; Benth. & Hook. f., Gen. Pl. 3 (2): 1018--1025. 1883; Hieron. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 2 (4): 21--27. 1887; Poulsen, Vidensk. Medd. Naturh. For. Kjøbenhavn. 40: 221--283, pl. 6--12. 1888; A. W. Chapm., Fl. South. U. S., ed. 2, 502--504, 658, & 696. 1889; F. Muell., Proc. Linn. Soc. New S. Wales 5: 250. 1890; F. Muell., Bot. Centralbl. 44: 302. 1890; Morong, Bull. Torrey Bot. Club 18: 351--362. 1891; Maxim., Diagn. Pl. Nov. As. 8: 25. 1892; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 879. 1893; Moore & Betché, Handb. Fl. N. South Wales 440. 1893; J. G. Baker, Journ. Linn. Soc. Lond. Bot. 20: 227. 1893; Coulter., Contrib. U. S. Nat. Herb. 2: 459. 1894; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 2: 681. 1895; Britton & Br., Ill. Fl., ed. 1, 1: 371--373 & 602, fig. 899--901. 1896; Ruhl. in Engl., Bot. Jahrb. 27: 65--85. 1899; Tate, Trans. Roy. Soc. S. Austral. 23: 291. 1899; H. T. Holm, Bot. Gaz. 31: 17--37. 1901; N. E. Br. in Thiselt.-Dyer, Fl. Trop. Afr. 8: 255. 1901; F. M. Bailey, Queensl. Fl. 6: 1715. 1902; Prain, Bengal Pl., pr. 1, 1: 121. 1903; B. L. Robinson, Rhodora 5: 175--176. 1903; J. K. Small, Fl. Southeast. U. S., ed. 1, 236. 1903; Post & Kuntze, Lexicon 544. 1904; Ruhl. in Urb., Engl. Bot. Jahrb. 37: 519--520. 1906; Ann. N. Y. Acad. Sci. 17 (1): pl. 24, fig. 1. 1906; C. H. Wright, Kew Bull. Misc. Inf. 1907: 3--4. 1907; Robinson & Fern. in A. Gray, New Man. Bot., ed. 7, 260--261 & 898. 1908; M. A. Day, Check List 39. 1908; Beauverd, Boiss., ser. 2, 8: 986--988. 1909; Nakai, Bot. Mag. Tokyo 24: 5--6. 1910; Kawakami, List Pl. Formos. 130. 1910; G. T. Stevens, Ill. Guide Flow. Pl. 9, fig. 5. 1910; A. Chev., Sudania 1: 7. 1911; W. H. Br., Contrib. U. S. Nat. Herb. 13: 323. 1911; Nakai, Bot. Mag. Tokyo 26: [93--94]. 1912; Ann. Rep. N. J. State Mus. 1910: pl. 28, fig. 2. 1912; F. M. Bailey, Compreh. Cat. Queensl. Pl. 584. 1913; J. K. Small, Fl. Southeast. U. S., ed. 2, 236. 1913; Britton & Br., Ill. Fl., ed. 2, 1: 453--455 & [678]. 1913; Domin, Bibl. Bot. 20: 506. 1915; Maiden & Betché, Census New S. Wales Pl. 38. 1916; Fern., Rhodora 23: 92. 1921; Fyson, Journ. Indian Bot. 2: 133--150, 192--207, 259--266, & 307--320, pl. 1--40 (1921) and 3: 12--18 & 91--115, pl. 11--32. 1922; Molino, Physia 6: 361--363. 1923; Lützelburg, Estud. Bot. Nordéste 3: 147 & 150. 1923; Anon., Kew Bull. Misc. Inf. 1923: 303. 1923; Fyson, Indian Sp. Erioc. 1--88, pl. 1--51. 1923; Herzog in Fedde, Repert. Spec. Nov. 20: 82--88. 1924; Ruhl. in Fedde, Repert. Spec. Nov. 22: 29--35. 1925; Alv. Silv., Fl. Mont. 1--426, pl. 1--254. 1928; A. S. Hitchc., Prop. Brit. Bot. 122. 1929; Uphof in Karst. & Schenck, Vegetationsb. 21 (1-2): n.p. 1930; Ruhl., Notizbl. Bot. Gart. Berlin 10: 1040--1044. 1930; Herzog in Fedde, Repert. Spec. Nov. 29: 202--213. 1931; N. E. Br., Kew Bull. Misc. Inf. 1931: 61. 1931; Ewart, Fl. Vict. 263. 1931; Solomon, Journ. Indian Bot. Soc. 10: 139--144. 1931; Tu, Chinese Bot. Dict., abrdg. ed., 1347. 1933; R. M. Adam, New Fl. & Silv. 6: 60--63, pl. 24 & 25. 1933; J. K. Small, Man. Southeast. Fl. 258. 1933; Tang, Contrib. Inst. Bot. Nat. Acad. Peiping 2: 133. 1934; H. B. Davis, Life & Works Pringle 43,

- 55, 56, 94, 105, 123, 141, 219, & 655. 1936; Van Steenis, Trop. Natuur 25: 2. 1936; Moldenke, N. Am. Fl. 19: 17-50. 1937; Cory, Texas Agr. Exp. Sta. Bull. 550: 29. 1937; Merr. & Walker, Bibl. East. Asiat. Bot. 343. 1938; Satake, Journ. Jap. Bot. 15: 140-145 & 627-632. 1939; Moldenke, Phytologia 1: 309-336. 1939; Moldenke, Carnegie Inst. Wash. Publ. 522: 137-148. 1940; Moldenke, Phytologia 2: 6-7. 1941; Wells, Bot. Rev. 8: 537. 1942; Moldenke in Lundell, Fl. Texas 3 (1): 4-5. 1942; Carolin. Florist Gov. J. Drayton S. C. 14. 1943; Black, Fl. S. Austral., ed. 2, 1: 179. 1943; Moldenke in Woodson & Schery, Ann. Mo. Bot. Gard. 31: 65-71. 1944; Rouleau, Contrib. Inst. Bot. Univ. Montreal 54: 161 & 313. 1944; Fyles & Robertson, U. S. Pub. Health Bull. 286: 106. 1944; W. A. Murrill, Guide Fla. Pl. 34. 1945; Castellanos in Descole, Gen. Sp. Pl. Argent. Erioc. 87, pl. 17. 1945; Abbiatti, Revist. Mus. La Plata Bot. 6 (26): 329-330, pl. 2 (1), fig. 4 (d) & 6. 1946; Razi, Journ. Mysore Univ. 7 (4): 77. 1946; Phodora 48: iv & 58. 1946; Moldenke, Known Geogr. Distrib. Erioc. [1]-62. 1946; R. R. Tatnall, Fl. Del. 75. 1946; Abbiatti, Soc. Argent. Bot. Bul. 1: 280-281. 1946; W. Robyns, Bull. Jard. Bot. Brux. 18: 135. 1946; J. Hutchinson, Botanist in South. Afr. 591, 654, & 660. 1946; Moldenke, Phytologia 2: 349-352. 1947; Moldenke, Wrightia 1: 220-221. 1948; Castellanos, Lilloa 20: 244. 1949; Raizada, Sci. & Cult. 14: 387-388. 1949; Faegri & Iversen, Text-book Mod. Pollen Analys. 193 & 221. 1950; Hare, Journ. Linn. Soc. Lond. Bot. 53: 422-448. 1950; Herter, Rev. Sudam. Bot. 8: 163-164. 1950; Reitz, Anais Bot. 2: 32 & 34. 1950; Satake, Journ. Jap. Bot. 26: 221. 1951; Maekawa, Journ. Jap. Bot. 26: 116. 1951; Meikle, Am. Journ. Bot. 39: 44-51. 1952; Penfound, Bot. Rev. 18: 431. 1952; Beard, Ecol. Monog. 23: 177. 1953; Zinderenbakker, S. Afr. Pollen 1: 32, 36, & 79, pl. 7, fig. 33 & 44. 1953; Moldenke, Biol. Abstr. 27: 984, 2026, & 3121. 1953; Moacyr Lisboa, Cent. Nascim. Leon. Bot. Damazio [2]. 1954; Reitz, Sellowia 6: 256. 1954; Koyama, Philip. Journ. Sci. Bot. 84: 367-368 & 378, pl. 6. 1955; Razi, Journ. Mysore Univ. B.14 (10): 460. 1955; Razi, Contrib. Bot. 40: 92. 1955; Razi, Proc. Nat. Inst. Sci. India 21B (2): 82. 1955; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Index 1955: 29-30. 1956; Koyama, Journ. Jap. Bot. 31: 9-11, fig. 3. 1956; Masa Ikusi, Pollen Gr. Jap. 1956; Angely, Cat. Estat. 10: [2]. 1956; Mutisia 25: 26. 1956; Rambo, Sellowia 7: 263 & 292. 1956; Soukup, Biota 1: 122 & 208. 1956; Boivin, Bull. Bot. Soc. France 103: 503. 1956; Reitz, Sellowia 7: 94 & 124-125. 1956; Moldenke, Bull. Jard. Bot. Brux. 27: 116-141. 1957; M. T. Davis, Taxon 6: 179 & 181. 1957; J. A. Steyermark, Fieldiana 28: 1188. 1957; Anon., Biol. Abstr. 29: 3248 & 3626. 1957; Angely, Fl. Paran. 7: 7 (1957) and 10: 1-16. 1957; Anon., Biol. Abstr. 29: 3248 & 3626 (1957) and 30: 3931 & 4393. 1958; Anon., U. S. Dept. Agr. Bot. Subj. Index 5: 4226-4277. 1958; Kostermans, Proc. Sympos. Humid Trop. Veg. 159. 1958; Suvatabandhu, Proc. Sympos. Humid Trop. Veg. 173. 1958; Alain, Revist. Soc. Cub. Bot. 15: 41 & 49. 1958; de Roon, Internat. Direct. Spec. 79, 201, & 231. 1958; Angely, Bol. Inst. Par. Bot. 8: 34. 1958; Soukup, Biota 2: 57. 1958; W. Robyns, Fl. Cong. Belg. Tabl. Anal. 17, 57, & 64. 1958; Bullock, Taxon 7:

15. 1958; P. van Royen, Nov. Guin., new ser., 10: 21--44, fig. 1-5. 1959; Moldenke, Résumé [1], 3-16, 19, 22, 23, 25, 27, 32, 35-38, 41, 43-48, 51-54, 57, 63, 66-80, 83, 84, 87-89, 91, 92, 94-109, 112-117, 119, 123, 126, 129, 133-138, 140, 142-151, 153, 154, 156-163, 165-167, 169-176, 178-181, 184, 186, 188, 190-193, 201, 204-209, 211, 218, 220, 237, 240, 249, 277, 279-281, 284-294, 301, 302, 309, 320, 323-329, 334, 342, 345, 350-352, 355, 395-402, 414-420, 424, 426, 428, & 479-493. 1959; Soukup, Biota 5: 300-301. 1959; Moldenke, Biol. Abstr. 33: 3171. 1959; Taxon 8: 77. 1959; Bullock, Taxon 8: 171. 1959; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Index 1958: 31. 1959; J. Hutchinson, Fam. Flow. Pl. 2: 574. 1959; Razi, Rec. Bot. Surv. India 18: 19. 1959; Anon., Kew. Bull. Gen. Index 1929-1956, 111. 1959; Reitz, Sellowia 11: 103. 1959; Moldenke, Résumé Suppl. 1: [1]-3, 5-19, 21, 23, 25, & 26 (1959) and 2: [1], 2, 4-7, 9, & 16. 1960; P. van Royen, Blumea 10: 126-135, fig. 1. 1960; Leenhouts in Lam & Leenhouts, Blumea 10 (2): xvi. 1960; Angely, Liv. Gen. Bot. Bras. 9, 19, & 44. 1960; Angely, Fl. Paran. 15: 6 & 14 (1960) and 16: 33. 1960; Straka, Erdkunde 14: 60, 87, 90, & 95. 1960; Rennò, Levant. Herb. Inst. Agron. 68. 1960; Moldenke, Biol. Abstr. 35: 983, 1688, & 2177. 1960; Santapau, Fl. Bombay & Salsette [3]. 1960; Nath, Bot. Surv. South. Shan States 9 & 20. 1960; Panigrahi & Naik, Bull. Bot. Surv. India 3: 383. 1961; Runner, Rep. G. W. Groff Coll. 292. 1961; Fables, Bartonia 32: 9. 1961; Reitz, Sellowia 13: 37. 1961; Hamann, Willdenowia 2: 640, 644, chart 1, 645, 651-654, 656-658, 660, 663, 665-685, 687, 694, 711-714, 716, 745, 746, 752, 754, 761, & 763. 1961; Angely, Fl. Paran. 17: 10, 12, & 24. 1961; Tamayo, Bol. Soc. Venez. Cienc. Nat. 22: 40 & 88. 1961; Moldenke, Biol. Abstr. 36: 2843. 1961; Clapham, Tutin, & Warburg, Fl. Brit. Isles, ed. 2, 961-962. 1962; Hamann, Willdenowia 3: 179 & 191. 1962; Moldenke, Biol. Abstr. 40: 250 & 1560. 1962; Van Steenis-Kruseman, Fl. Males. Bull. 3: xli, 687, 780, 781, 861, & 862. 1962; J. H. Willis, Handb. Pl. Vict. 281. 1962; K. Larsen, Nat. Hist. Bull. Siam Soc. 20: 113. 1962; Hatusima, Mem. South. Indust. Sci. Inst. Kagoshima Univ. 3 (1): 123 (1962) and 3 (2): 123 & 131. 1962; G. L. Shah, Bull. Bot. Surv. India 4: 237. 1962; L. B. Sm., Contrib. U. S. Nat. Herb. 35: 225. 1962; Angely, Fl. Bacia Par. 22: 15, 25, & 31. 1962; Moldenke, Résumé Suppl. 3: [1]-5, 9, 12, 15-24, 26, 28, 31, & 32 (1962), 4: [1]-7, 11, & 21 (1962), and 5: [1], 2, 5, & 6. 1962; Hocking, Excerpt. Bot. A.4: 591-593 (1962) and A.6: 454. 1963; H. P. Riley, Fam. Flow. Pl. S. Afr. 199. 1963; Prain, Bengal Pl., pr. 2, 1: 121 (1963) and 2: 847-848. 1963; Moldenke, Biol. Abstr. 42: 1517. 1963; Soukup, Biota 4: 320. 1963; E. H. Bryan, Pacific Botanists. 1963; Killick, Bot. Surv. S. Afr. Mem. 34: 87, 108, 109, & 119. 1963; Hegnauer, Chemotax. Pfl. 2: 152-154 & 517. 1963; Arker, Water Pl., ed. 2, 286. 1963; J. Joseph, Bull. Bot. Surv. India 5: 283 & 297. 1963; Montgomery & Fairbrothers, Bull. Torrey Bot. Club 90: 92 & 96. 1963; Gleason & Cronquist, Man. Vasc. Pl. 183-184. 1963; Espírito Santo, Junta Invest. Ultramar Est. Ens. & Docum. 104: 54 & 88. 1963;

Moldenke, Résumé Suppl. 6: [1], 2, 5, 6, 8, & 9 (1963), 7: 3-6 (1963), 8: 2, 3, & 5 (1964), 9: 6 (1964), 10: 1, 2, & 4-7 (1964), and 11: [1] & 4-6. 1964; Moldenke, Biol. Abstr. 45: 3521, 5019, B.43, B.44, B.117, & B.118. 1964; Angely, Bibl. Veg. Paran. 90, 98, 101, 155, 158, 182, 195-197, & 253. 1964; Angely, Fl. Paran. 32: 60. 1964; Moldenke, Mém. Mus. Hist. Nat. Paris, new ser. B, Bot. 15: 6. 1964; Koyama in Kitamura, Murata, & Koyama, Col. Illustr. Herb. Pl. Japan 175-185, pl. 48. 1964; Anon., Biol. Abstr. 45: B.42 & B.116. 1964; Hocking, Excerpt. Bot. A.8: 190. 1964; Soukup, Biota 5: 194. 1964; P. Tomlinson, Journ. Linn. Soc. Lond. Bot. 59: 163-173. 1964; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Index 1963: 9. 1964; Anon., Ann. Mo. Bot. Gard. 51: iv. 1964; Langman, Select. Guide Lit. Flow. Pl. Mex. 911. 1964; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Bull. 15: 23. 1964; Maguire, Assoc. Trop. Biol. Bull. 3: 25. 1964; Altman & Dittmer, Biol. Data Book 568. 1964; Klein, Anais XV Congr. Soc. Bot. Bras. 271. 1964; Marie-Victorin, Fl. Laurent., ed. 2, 83, 90, 679, & 857. 1964; Rao & Sastry, Bull. Bot. Surv. India 6: 281 & 284. 1964; Punt, Reg. Veg. 9. 1964; Batson, Wild Fls. S. C. 28. 1964; Panigrahi, Chowdhury, Raju, & Deka, Bull. Bot. Surv. India 6: 260-261. 1964; Bhattacharyya, Bull. Bot. Surv. India 6: 208. 1964; C. M. & D. S. Patel, Vidya 7: [58]-70. 1964; Moldenke, Biol. Abstr. 46: 1012 & 2131 (1965), 46 (3): B.46 & B.121 (1965), and 46 (6): B.45. 1965; F. A. Barkley, List Ord. Fam. Anthoph. 15, 113, & 164. 1965; Naurois & Roux, Bull. Inst. Fr. Afr. Noire A. 27: 854. 1965; S. A. Manning, Syst. Guide Flow. Pl. 24 & 237. 1965; Anon., Biol. Abstr. 46 (6): B.45. 1965; Hunter, Assoc. Trop. Biol. Bull. 5: 33. 1965; Hedberg, Assoc. Etud. Tax. Fl. Afr. Trop. Bull. 16: 4. 1965; R. C. Cook, Leaders Am. Sci., ed. 6, 414. 1965; A. Robyns, Ann. Mo. Bot. Gard. 52: 238, 239, 242, & 246. 1965; F. H. Montgomery, Native Wild Pl., pr. 2, 9. 1965; Thanikaimoni, Pollen & Spores 7: 181-191. 1965; J. S. Beard, Descrip. Cat. W. Austral. Pl. 9. 1965; D. Walker, Govt. Sarawak Sympos. Ecol. Res. Humid Trop. Veg. 141. 1965; Thanikaimoni, Mém. Mus. Nat. Hist. Nat. Paris, new ser. B, 14: 9-38. 1965; Hedberg, Webbia 19: 526. 1965; Humbert, Trav. Sect. Scient. & Techn. Inst. Franç. Pond., ser. 6, Not. Carte Madag. 66. 1965; Stocking, Nat. Conserv. Ecol. Stud. Leafl. 6: [15]. 1965; F. K. Fosberg, Govt. Sarawak Sympos. Ecol. Res. Humid Trop. Veg. 286. 1965; Moldenke, Résumé Suppl. 12: [1]-5 & 7-12 (1965), 13: [1], 3, 5, & 7 (1966), and 14: [1]-3, 8, & 9. 1966; F. H. Montgomery, Plants from Sea to Sea 4 & 9. 1966; Thanikaimoni, Biol. Abstr. 47: 4169. 1966; O. D. Evans, Contrib. New S. Wales Nat. Herb. Fl. Ser. 27/28: 9-12. 1966; Kral, Sida 2: 285-332. 1966; Erdtman, Pollen Morph. 163, fig. 94. 1966; Anon., Ind. Bibliog. Bot. Trop. 3 (1): 41. 1966; P. B. Tomlinson, Excerpt. Bot. 10 (4): A.310. 1966; Airy Shaw in Willis, Dict. Flow. Pl., ed. 7, vii, lii, 168, 223, 224, 349, 396, 417, 418, 483, 620, 647, 758, 950, 956, 1057, 1091, & 1092. 1966; Anon., Gen. Costa Ric. Phan. 2. 1966; R. C. Jacks., Reg. Veget. 43: 33. 1966; Anon., Biol. Abstr. 47 (10): S. 50. 1966; J. A. Steyermark, Act. Bot. Venez. 1: 15, 19, 78, 135, & 148. 1966; Shinners, Sida 2: 441. 1966.